

U.S. Patent Appln. Ser. No. 10/625,605
Submission Responsive to Final Rejection dated December 19, 2005
May 19, 2006
Attorney Docket No. 60783.000005

AMENDMENTS TO THE CLAIMS:

Please amend claims 15, 18 and 28 as set forth below. This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-14 (canceled).

Claim 15. (currently amended) A method for forming a plastic container for packaging a hot-filled food product, comprising:

selecting at least one polymer for a plastic container; and

forming the container from the heated polymer;

wherein the plastic container comprises:

a mouth;

a bottom surface; and

a container wall between the mouth and the bottom surface,

wherein prior to hot filling of the container with a food product, the bottom surface is outwardly flexed; wherein further one of the outwardly flexed bottom surface or the container wall is configured to flex inward into the cavity of the container with food product
the bottom surface of the container is formed to consist of a curved surface contiguous to a concentric sleeve, wherein the curved surface is convex to the cavity of the container and the concentric sleeve is proximate to both the curved surface and the container wall, wherein further the concentric sleeve is substantially planar between the curved surface and the container wall,

wherein further the convex curved surface is formed such that it flexes inward toward the cavity of the container upon filling and sealing the container with hot-filled food product at temperatures of about 160°F to about 200°F and the subsequent formation of a pressure differential between the interior of the sealed container and atmospheric pressure of about 2.5 psi to about 10 psi, and maintains that configuration following cooling of the hot food product, and

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wherein further the container wall is formed such that it withstands buckling upon filling and sealing the container with hot-filled food product at temperatures of about 160°F to about 200°F and the subsequent formation of a pressure differential between the interior of the sealed container and atmospheric pressure of about 2.5 psi to about 10 psi, and maintains that configuration following cooling of the hot food product.

wherein further inward flexing of the bottom surface or the container wall reduces a pressure differential between the inside of the container and atmospheric pressure when either the container is hot filled with food product or when the container is transported from a locale of lower atmospheric pressure to higher atmospheric pressure; and

wherein further the non flexing surface maintains the same form from prior to hot filling or transport, wherein further the flexing surface maintains its inwardly flexed configuration following cooling of the hot filled container.

Claim 16. (canceled).

Claim 17. (original). The method of claim 15, wherein forming the container comprises extrusion, vacuum forming, injection molding, blister packaging, melt phase forming or blow molding.

Claim 18. (currently amended). A method of manufacturing a plastic container with a selectively deformable surface, comprising:

selecting at least one polymer;
heating the at least one polymer to its VICAT temperature; and
thermoforming a container from the heated polymer;
wherein the plastic container comprises:
a mouth;
a bottom surface; and
a container wall between the mouth and the bottom surface,

wherein prior to hot filling of the container with a food product, the bottom surface is outwardly flexed, wherein further one of the outwardly flexed bottom surface or the

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container wall is configured to flex inward into the cavity of the container with food product
the bottom surface of the container is formed during thermoforming to consist of a curved
surface contiguous to a concentric sleeve, wherein the curved surface is convex to the cavity
of the container and the concentric sleeve is proximate to both the curved surface and the
container wall, wherein further the concentric sleeve is substantially planar between the
curved surface and the container wall.

wherein further the convex curved surface is formed during thermoforming such that it
flexes inward toward the cavity of the container upon filling and sealing the container with
hot-filled food product at temperatures of about 160°F to about 200°F and the subsequent
formation of a pressure differential between the interior of the sealed container and
atmospheric pressure of about 2.5 psi to about 10 psi, and maintains that configuration
following cooling of the hot food product, and

wherein further the container wall is formed during thermoforming such that it withstands
buckling upon filling and sealing the container with hot-filled food product at temperatures
of about 160°F to about 200°F and the subsequent formation of a pressure differential
between the interior of the sealed container and atmospheric pressure of about 2.5 psi to
about 10 psi, and maintains that configuration following cooling of the hot food product.

wherein further the inward flexing of the bottom surface or the container wall
reduces a pressure differential between the inside of the container and atmospheric
pressure when either the container is hot filled with food product or when the container is
transported from a locale of lower atmospheric pressure to higher atmospheric pressure;

wherein further the non-flexing surface maintains the same form from prior to
hot filling or transport, and wherein further the flexing surface maintains its inwardly
flexed configuration following cooling of the hot filled container.

Claim 19. (original). The method of claim 18, wherein the thickness of the container walls decreases from a point substantially at the mouth to a point substantially at the bottom surface.

Claim 20. (canceled).

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Claim 21. (original). The method of claim 20, wherein the circumference of the mouth is greater than the circumference of the bottom surface.

Claim 22. (original). The method of claim 21, wherein the plastic comprises a plastic suitable for solid phase pressure forming.

Claim 23. (original). The method of claim 22, wherein the plastic further comprises polypropylene.

Claim 24. (original). The method of claim 23, wherein the plastic further comprises a barrier enhancement agent.

Claim 25. (original). The method of claim 24, wherein the barrier enhancement agent comprises ethylene vinyl acetate-vinyl alcohol.

Claim 26. (original). The plastic container of claim 25, wherein the plastic further comprises an adhesive suitable for solid phase pressure forming.

Claim 27. (original). The plastic container of claim 26, wherein the adhesive comprises an antioxidant

Claim 28. (currently amended). The plastic container of claim 22, wherein the plastic container is formed from a plastic sheet comprising up to about 15 volume % ethylene vinyl acetate-vinyl alcohol[[,]] and about 80 to about 90 volume % polypropylene and about 5 to about 10 volume % adhesive.

Claim 29. (original). The plastic container of claim 18, wherein the plastic container is formed from a plastic sheet having one or more layers, and wherein further the thickness of the container walls are about 70-80 volume % of the thickness of the plastic sheet at a location substantially adjacent to the container mouth and about 20-40 volume % of the sheet at a location substantially adjacent to the bottom surface, and the thickness of the bottom surface is about 15-20 volume % of the thickness of the plastic sheet.

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Claim 30. (original). The plastic container of claim 29, wherein the container wall thickness uniformly decreases from a location substantially adjacent to the container mouth to a point substantially adjacent to the bottom surface.

Claim 31. (original). The plastic container of claim 30, wherein the container walls are about 0.7 mm thick at a location substantially adjacent to the container mouth and about 0.28 mm thick at a point substantially adjacent to the bottom surface, and the thickness of the bottom surface is about 0.16 mm.